WHAT IS CLAIMED IS:

1. A stage apparatus comprising:

a base having a reference surface;

a moving unit which moves along the reference surface;

a static bearing which is provided in the moving unit and which supports the moving unit such that the moving unit can move along the reference surface; and

a temperature controller which is provided in the moving unit and which controls the temperature of gas supplied to the static bearing.

2. A stage apparatus according to Claim 1, further comprising:

a target which is mounted on the moving unit; and

a coil unit which drives the moving unit along the reference surface,

wherein the temperature controller is disposed between the coil unit and the target.

3. A stage apparatus according to Claim 2, wherein the coil unit is disposed in the moving unit.

4. A stage apparatus according to Claim 1, further comprising:

a supply pipe which is disposed in the moving unit and through which the gas is supplied,

wherein the supply pipe is adjacent to the temperature controller.

5. A stage apparatus according to Claim 3, wherein the temperature controller uses a coolant for controlling the temperature, and the direction in which the coolant flows is opposite to that in which the gas flows through the supply pipe.

6. A stage apparatus according to Claim 1, wherein at least a portion of the supply pipe is surrounded by the temperature controller.

7. A stage apparatus according to Claim 2, wherein the moving unit comprises a fine-motion driver which drives the target in at least one direction, and the temperature controller is disposed between the coil unit and the fine-motion driver.

8. A stage apparatus according to Claim 7, wherein the fine-motion driver drives the target in six directions.

9. A stage apparatus according to Claim 1, wherein the

temperature controller is disposed near the outer periphery of the moving unit.

10. A stage apparatus according to Claim 1, further comprising a laser interferometer for measuring the position of the moving unit.

11. A stage apparatus which positions a target, said apparatus comprising:

a base having a reference surface;

a moving unit which moves along the reference surface;

a static bearing which is provided in the moving unit and which supports the moving unit such that the moving unit can move along the reference surface;

a temperature controller which is provided in the moving unit and which controls the temperature of gas supplied to the static bearing; and

a coil unit which is provided in the moving unit and which drives the moving unit along the reference surface,

wherein the temperature controller is disposed between the coil unit and the target.

12. An exposure system which transfers a pattern formed on an original onto a substrate and which includes a stage apparatus for moving at least one of the original and

the substrate, the stage apparatus comprising:

a base having a reference surface;

a moving unit on which at least one of the substrate and the original is mounted and which moves along the reference surface;

a static bearing which is provided in the moving unit and which supports the moving unit, such that the moving unit can move along the reference surface; and

a temperature controller which is provided in the moving unit and which controls the temperature of gas supplied to the static bearing.

13. A method of manufacturing a device, the method comprising:

manufacturing the device using a group of manufacturing systems, including an exposure system according to Claim 12.

14. A stage apparatus comprising:

a base having a reference surface;

a first moving unit which moves along the reference surface within a first range;

a second moving unit which is placed on the first moving unit and which moves with respect to the first moving unit within a second range which is smaller than that of the first range; and

a temperature controller which is disposed between the first moving unit and the second moving unit.

15. A stage apparatus according to Claim 14, further comprising a coil unit provided in the first moving unit.